JUNE 1949

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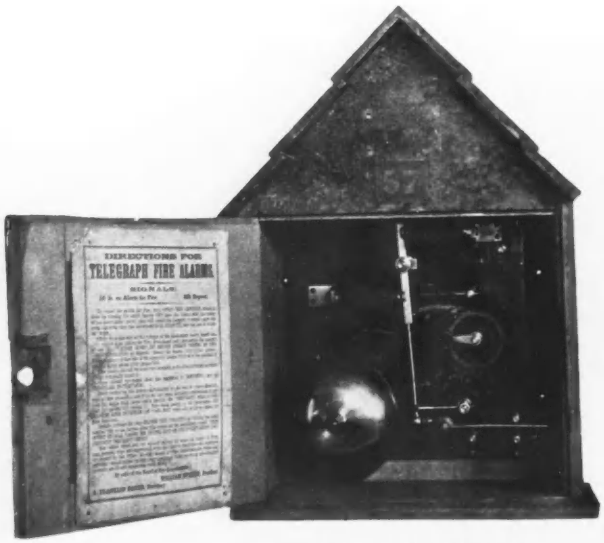

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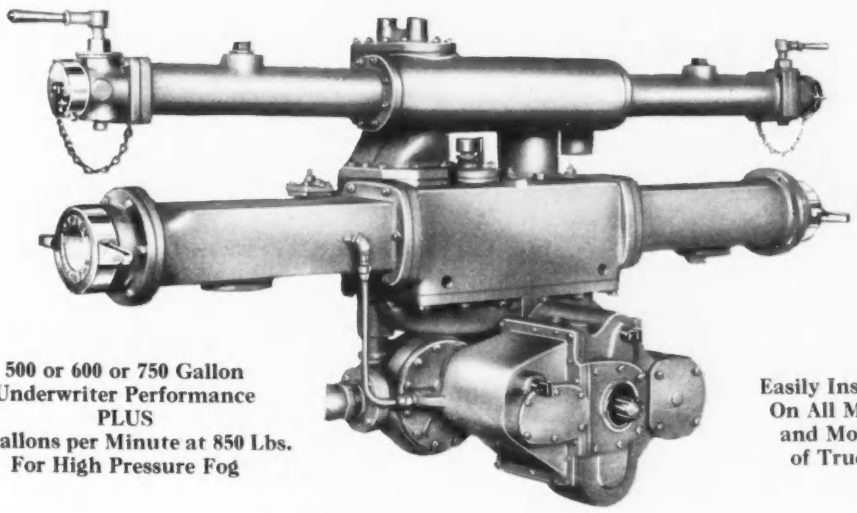

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OUTPUT FROM THIRD STAGE

VOLUME	PRESSURE	ENGINE SPEED
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157 G.P.M.	600 Pounds	2350 R.P.M.
125 G.P.M.	700 Pounds	2530 R.P.M.
92 G.P.M.	800 Pounds	2700 R.P.M.
77 G.P.M.	850 Pounds	2780 R.P.M.
61 G.P.M.	900 Pounds	2870 R.P.M.

OUTPUT WITH FIRST AND SECOND STAGES IN PARALLEL AND OPERATING SIMULTANEOUSLY WITH THE THIRD STAGE

VOLUME	PRESSURE	ENGINE SPEED
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500 G.P.M. (from first and second stages)	120 Pounds	2370 R.P.M.

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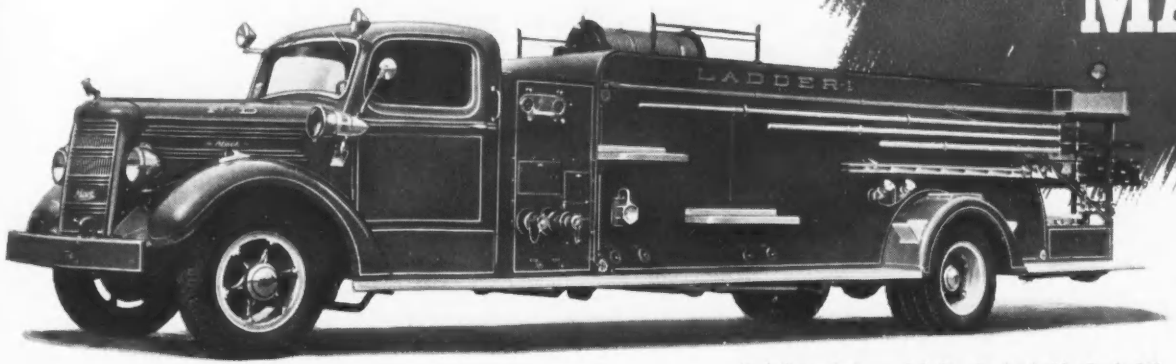

Mack Type 45, Coupe Cab City Service Ladder Truck, 200-gpm booster pump, recently delivered to Orono, Maine.

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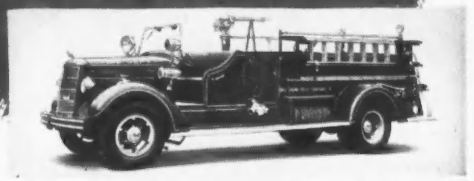
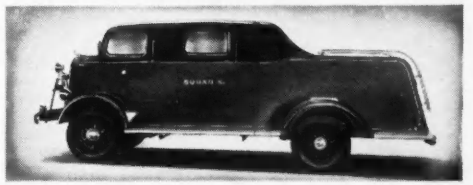


Type 45, Open Seat Style Hose Car, 200-gpm booster pump, 1500-gpm turret nozzle, now serving Bay Shore, L. I.

Type 45, 500-gpm Semi Cab Pumper-Tanker, 400-gal. booster tank, recently put in service at Tallman, N. Y.



Type 45, Cab-over-engine Squad Car, Sedan Cab Design, one of 12 supplied to Chicago, Illinois.

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Fire Apparatus
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Firemen

Volume 16 — Number 6

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THE cover photo (*Acme*) gives a more poignant appeal for effective rural fire protection than a thousand words. The picture shows 78-year-old Ida Walters fleeing from her burning home ten miles from Kalamazoo, Michigan. The suitcase, lamp and portable radio were the only belongings saved.

Water tank apparatus supplying streams from fog nozzles is the proven answer to the rural fire fighting problem. Even where flames have great headway, two or more fog jets applied in an aggressive manner can quickly bring the fire down to mop-up size. If static water supplies and fire department pumpers are available these can be used to back up the attack with fog lines, but experience has shown that pumper relays are seldom fast enough for effective initial attack.

DURING the next three months a large number of the states will be holding their annual fire schools or "fire colleges." Fire school officials have worked long and hard and many conferences have been held to make the 1949 programs the best to date. Leaders of various fire service organizations including the NFPA, the National Board of Underwriters, the International Association of Fire Chiefs, and various insurance inspection bureaus, have been invited to participate. These men will travel hundreds of miles and their organizations will go to great expense to bring your state fire school the very latest information on firemanics. However, the thing that is most needed for a successful fire school season in 1949 is for you to be there. Each department should have a minimum of at least two men at the state fire school.

DURING the spring two fatal accidents were reported involving the response of volunteer fire department apparatus to fires. While such accidents do not appear to occur with quite the frequency that was common a generation ago, it is still very important for every fire fighter to remember that his first duty is to get to the fire safely with his equipment. No doubt, improved fire apparatus, better road conditions and more experienced drivers are reducing the number of fatal accidents while responding to alarms. Nevertheless, the records of a number of fire departments show that there are all too many non-fatal accidents in which men are injured and equipment is damaged and put out of service.

The first fatal accident, reported by NFPA Member Norton T. Ames, of Oregon, Wisconsin, concerns an accident at Somers, Wisconsin, where a fire department tank truck overturned killing three volunteer firemen.

"Late in March the Township department was responding to a grass fire in the rural area. They were traveling on a down grade; the turn was to the left. A rain the night before had covered the roadway at the turn with fine stones which apparently rolled under the centrifugal force, as the truck was making the turn. I gathered that some of the wheels got into soft ground.

"The tank was a cylindrical drum, about 4 ft. in diameter. They apparently knew that the vehicle was top-heavy. With the bed pieces under the tank, its top was well above my head. The chassis was a Chevrolet truck, 1½ ton, 1936 model.

"One fireman was on the right hand deck, beside the tank, and another was standing on the right hand running board holding to the hand rail attached to the seat. These two were killed nearly instantly. I would infer that the later death was the man in the seat beside the driver. I believe that the survivor was the driver. Tank was believed to have been full, 1,000 gallons."

It might be observed that 4 tons of water is a heavy load for a thirteen-year-old 1½-ton chassis. The NFPA standards for volunteer fire department apparatus recommend a 500-gallon water tank for tank apparatus built on small commercial chassis.

The second fatal accident in April is reported by a bulletin issued by Warren W. Pettyjohn, Secretary of the Delaware Volunteer Firemen's Association and entitled "Carelessness Brings Disaster":

"Yardley, April 5th — A volunteer fireman, James Hurley, 25, of Brown St., was fatally injured last night when he was crushed between the engine and the doorway of the firehouse.

"Police said Hurley jumped on the engine as it started out of the building in answer to an alarm that later turned out to be false. As the engine swung around Hurley was knocked from the running board. He died less than an hour later.

"WHY — Do volunteer firemen insist on taking these chances, in the first place this man not only lost his life but at the same time delayed his company in answering an alarm?

"WE — So many times have seen the boys take so many chances of jumping on a truck with a coat and boots under one arm making a grab with the other for his life.

"It looks to us from here that there could be two answers:

"1st — Have a rule that the truck must pull out of the house and stop.

"2nd — That any member jumping on the apparatus while same is leaving the building, will have to answer to certain rules covering same.

"Boys, let's play safe, for you are no good to your company in the HOSPITAL."

The words "WITH SAFETY" should be added to every fire department operation. Get to the fire as quickly as possible — WITH SAFETY. In rolling out of the station the driver should make certain that his crew are safely aboard ready to go. A second or two spent on a safe start will pay dividends in efficient fire department operation. It might be added also that most municipal fire departments have strict rules against riding on the side of any apparatus other than ladder trucks which have no rear step. Most of the fatal accidents are to men riding on the sides of apparatus.

Fire News from Rockland, Maine

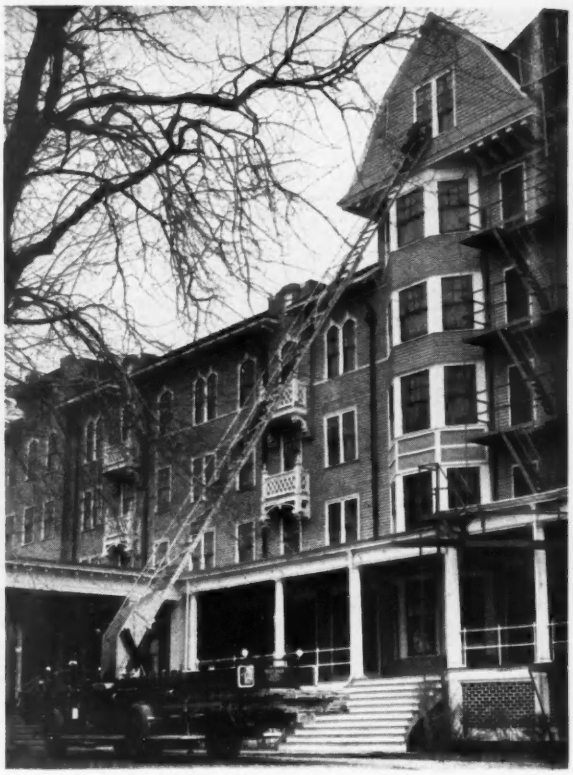
BY CHIEF VAN E. RUSSELL
(Member NFPA)

Rockland firemen got a workout at 4:30 A.M. February 13th, when fire was discovered in this old 2½-story wood frame American Legion home. The building has been rebuilt as part of a much larger structure.

•

The Rockland Fire Department has moved into a new headquarters station located in a former large warehouse which has been completely remodeled. The above view is taken from the balcony where sleeping quarters are located. There are five large sleeping rooms, a bathroom with showers, an alarm room, all-electric kitchen, recreation room 18 by 38 ft., a chief's office. There is also a maintenance and repair section. The apparatus room houses the new 75 ft. aerial equipped with a 750 gpm pump and 1000 ft. of 2½-in hose. Also shown is a 750 gpm Mack pumper with 2200 ft. 2½-in. hose and 200 ft. 1½-in. hose. Next is the 520 gallon tank truck with 400 gpm pump and a 100 gpm portable pump. Beyond this is the old city service ladder truck, fully equipped. Finally, there is a 500 gpm front-mount pump on a Ford chassis carrying 2200 ft. 2½-in. hose and 200 ft. 1½-in. hose. The building has excellent steam heating system with separate controls for various parts of the building. The pipe across the back of the apparatus floor is used for drying salvage covers. The building has three large overhead doors. The structure has been completely rewired to take care of any logical demand.

Sidney L. Cullen



Sidney L. Cullen

Rockland's new American LaFrance 75 ft. aerial ladder shown extended to the top floor of Hotel Samoset, a 175 room wooden frame resort hotel on Penobscot Bay, one of many large wooden structures protected by the Rockland Fire Department.

•

The Rockland Fire Department protects large areas of woodlands and farms surrounding the city, but within the city limits. The above airplane photograph was taken during a large bog fire last Autumn. This could have developed into another Bar Harbor conflagration. To bring it under control required 12 miles of 2½-in. hose. Several thousand feet of 1½-in. hose was used, a considerable portion of which was lost in the fire. Nearly 12 miles of roads were bulldozed. At the same time there were 18 fires in the city, three of which were very serious. Two malicious false alarms were sounded while the fire fighters were so engaged. The fight lasted more than ten days and excellent service was provided by the Red Cross. I had the usual number of "sidewalk chiefs," one of whom I had escorted into the area and put to work. I've never seen him since.

Community Fire Brigade, East Bathurst, N. B.

By E. J. Sturgeon
Deputy Provincial Fire Marshal, New Brunswick

East Bathurst fire truck. Chief Milton Carter, Chief Operator Omer Hashey.

DURING the past few years we have heard of many instances and read a good many articles on communities in Canada and the United States, performing some outstanding piece of community endeavor towards the bettering of their position and the safety and welfare of their citizens. In a number of cases this has been in the interests of fire prevention and protection and the establishment and organization of volunteer fire brigades. It is therefore with much pleasure that I report briefly the activities and achievements of still another Canadian community situated in the northern section of New Brunswick, with the sincere hope that other such communities may be stimulated in their activities by the outstanding efforts of East Bathurst and the surrounding areas. in the matter of providing themselves with fire fighting equipment.

To those of you who are not familiar with the northern section of Canada's unspoiled Province by the Sea, let me say that East Bathurst is a small village in Gloucester County. A suburb of the prosperous pulp and paper town of Bathurst. It is situated near the mouth of that famous Canadian salmon stream the Nipisiquit River, in the center of our lumbering Country. The population is of French and English descent, with about 60% being of French Canadian ancestry. Both languages are spoken freely by French and English citizens alike, and the community is no different in this respect than hundreds of others in eastern Canada. The citizens generally are of the hard-working, honest, religious type found so prominently in these French Catholic small towns of ours, and who have formed such a background along with their Scotch and English neighbors in building this Country.

During the last few years East Bathurst has on many occasions been visited by our greatest enemy "Fire." In 1945 the business men of the Community, headed by George Wiseman, a local merchant and lumberman, started negotiations for incorporation of the area with a view to providing the necessary public services and facilities that were absent and sorely needed. In explanation may I say that New Brunswick has three separate Acts by which a community such as this may become fully incorporated.

(1) As a Town under the Towns Incorporation Act.
(2) As a Village under the Villages Incorporation Act.
(3) As a Local Improvement District under The Local Improvement Districts Act, 1945.

East Bathurst was blocked in the first by lack of population and other necessary facilities.

The second was out, for by incorporating as a Village, they would lose certain privileges, such as Police Protection, street and sidewalk maintainence and winter roads now provided to rural communities by the Provincial Government.

The third could not be agreed upon by the citizens, although under this Act they could have incorporated for the services they needed, *i.e.*, street lighting, fire protection, water and sewerage, sidewalks and garbage disposal.

Many meetings were held and much discussion took place but due to the difference of opinion and other hinderances that were thrown in their way, the incorporation did not materialize. The community was therefore left without these services, especially the much desired and so very badly needed fire protection.

In 1947, The Provincial Fire Marshal's Department, fully realizing the need of such rural communities for suitable fire fighting equipment of a mobile type, especially designed for their needs at a price range within their means, designed and had built a "mobile fire fighting unit." This unit was demonstrated throughout the Province at sixty-three different places and in due course reached East Bathurst on July 19, 1947. From that day on the minds of George Wiseman and his fellow workers were made up. They were going to have suitable fire fighting equipment in spite of all the handicaps that had previously arisen to block their earlier efforts, and the "scoffing" of quite a number of their fellow citizens who told them that it could not be done. Steps were taken to organize. First a meeting was held at which a board of directors were appointed and an organization known as "The Community Fire Brigade" was born. The board of directors consisted of the following: George Wiseman, President; C. H. Buttimer, Vice President; Hector J. Fournier. Secretary-Treasurer; Raymond Audit, Percy W. Cormier, O. T. Carter and Orval Jamieson as Directors. Next came the organizing and dividing of the area into suitable zones, with a captain in charge of each zone. This was done and eight zones, comprising the village itself and many miles of the rural area, were organized. The idea being that sufficient money was to be raised by volunteer subscription to purchase and equip a fire department for the community.

At the time of this organization this community did not have any funds whatsoever, and the discouraging features of the problems confronting them can be better understood, when you consider that they had to overcome, along with many others, racial and religious differences, and above all, the recent victory of the opponents who had won the opening round in having the proposed incorporation plans blocked.

The captain of each zone was responsible for the collections in each particular zone, and each went to work. As a result in March, 1948, they had collected sufficient money to buy and pay for a 1948 two-ton truck chassis. But at least $4,000 more was needed. To stimulate interest the truck chassis was equipped with a large sign bearing the words "This is where your money has gone to date but we need $4,000 more." This truck was displayed in East Bathurst and driven over the entire area to allow all concerned to see that their money had been put to good use and that the project, so long considered a dream, was well on its way to becoming a reality.

Early in April, 1948, the truck chassis was delivered to a New Brunswick machine and iron Works, and an order placed for the building of a piece of fire fighting apparatus similar to that built for the Provincial Fire Marshal's Department. At that same time an order

Continued on page 17

Official Marine Corps photo

Left: One of five fire towers protecting 200 square mile camp area from forest fires. Above centre: Drill with one of a dozen 500 gpm pumpers protecting Camp Lejeune. Each carry 1500 ft. 2½-in. hose. Upper right: Attractive No. 4 fire station houses two pumpers and a foam truck and a compliment of twelve men.

Marine Fire Fighters Always Ready at Camp Lejeune

by Warrant Officer W. B. Kohl, U.S.M.C.

CAPABLY protecting from fire — vast tracts of forest lands—sprawled over an area of 200 square miles, with 3,154 buildings would be a challenge to any fire department. However, the fire department of Camp Lejeune, North Carolina, the Marine Corps' largest East Coast base, has mastered the challenge with an efficiency that has kept fire losses to a minimum on this huge Leatherneck reservation.

Within the limits of Camp Lejeune there are seven modern fire stations with up-to-date fire-fighting apparatus manned by well trained firemen. Originally the firemen were all Leathernecks, however, today the department is staffed by two Marine officers, 37 enlisted men and 18 civilian firemen.

The nerve center of Lejeune's network of fire stations strung throughout the vast "Leatherneck City," is Central Fire Station No. 3, located at Hadnot Point which is the busiest and most highly populated area of the base. In this station a dispatcher is on duty 24 hours a day. Three incoming telephones and a phone conference circuit serve his needs. He has a "running card" system which is complete with information on all buildings, and their locations.

In answering any of the 166 alarms turned in during 1948, the same procedure was followed. When a fire is reported the dispatcher consults the card index, which in a matter of seconds, tells him exactly where the fire is located and the equipment for first alarm calls, how much fire hazard is possible in the locality and what fire station is nearest to the blaze. He then pushes a button and tells the nearest station to proceed to the fire. If more help is needed from other stations he simply pushes another button which sends additional fire-fighting equipment to the blaze.

Central has three 500 gpm pumpers. These pumper trucks carry 1,500 feet of hose and have booster tanks. The station also houses two Dodge six-wheel drive trucks which the Marine firemen affectionately refer to as "Boondockers." These trucks are fully equipped to fight forest fires and can go where other trucks might get bogged down.

Station No. 4, another modern house, is located at Paradise Point, which is about 2½ miles from Hadnot Point. This section has many residential homes within its boundaries. It is equipped with two pumpers and a foam truck. The station has an average complement of 12 firemen. A station captain is in charge of the fire house.

Situated deep in the heart of the industrial area with property values equal to that of a moderate sized city is Station No. 5. This area contains warehouses, power plants, refrigeration plant, laundry, numerous maintenance shops and many other mercantile buildings, which house equipment, necessary to the life of this huge base. This is also the area in which the large Marine Corps Supply Depot is located, with vast warehouses containing millions of dollars worth of equipment. This station has two pumpers and one all-purpose squad wagon containing life saving equipment, searchlights, spare motors, and fire-fighting equipment.

Other fire stations are located at Courthouse Bay, thirteen miles from Hadnot Point; Tent Camp, several miles south of Jacksonville, N. C.; Montford Point Camp and the Marine Corps' extensive Rifle Range. All of these far flung activities are thriving communities with many buildings. The four outlying fire stations have a total of five pumpers and three "Boondockers," plus other modern apparatus and equipment used to combat all types of fires.

The conference phone circuit connects all these far-flung stations into a compact, highly efficient fire-fighting organization. The Chief and Assistant Fire Marshal have speedy little pick-up trucks equipped with FM radio communications. They maintain communication with military police vehicles which are similarly equipped.

Because of Lejeune's large tracts of wooded lands, one of the greatest hazards is forest fires. To combat this menace, five fire towers are located throughout the wooded areas. The towers, manned by civil service employees in the Roads and Forestry department, are in communication with fire headquarters.

Road and Forestry crews maintain many fire-tool-boxes located throughout the reservation for combating brush and forest fires. They also keep special fire tools and Indian back pump cans in readiness to be rushed by truck to the scene of any forest fire.

Camp Lejeune, like all military posts, has a rigid fire inspection and prevention program to cooperate in reducing fire hazards of all types. This program is a major factor in keeping fire losses to a minimum.

The camp fire marshal and his assistant (both Marine officers) are in over-all charge of the department. The civilian fire chief, A. B. Anderson, was a Lieutenant in the United States Navy in World War II. Chief Anderson served as commanding officer of fire-fighting schools at Newport, R. I.; Boston, Mass.; and Norfolk, Va. All of his deputies possess experience in fire-fighting techniques. The department's drill master was formerly an instructor at the Pennsylvania State Fire College.

Camp Lejeune is considered to be the world's most complete amphibious training base. This mammoth reservation has 130 miles of improved roads, 500 miles of secondary roads, 18 miles of railroad, 175 miles of phone lines.

An effort is made to keep the entire population of Camp Lejeune conscious of fire hazards and consequently losses are minimized. Strict rules governing smoking in areas where combustible materials are stored, in barracks, and in forests are rigidly enforced.

Pumper Relay Supplies City When Water Main Breaks

Data presented by Mr. Ernest Maxim of the Maxim Motor Company, Middleboro, Massachusetts, who showed colored motion pictures of the Taunton pumper relay at a meeting of the Massachusetts Fire Department Instructors Association, Fall River, Massachusetts, April 13.

PRESSURES IN TAUNTON PUMPER RELAY

(Three 1000 ft. lines between each pumper)

	Seagrave 1250 gpm centrifugal	Ahrens-Fox 1000 gpm piston	Ahrens-Fox 1000 gpm piston	Ma xim 1000gpm centrifugal	Maxim 1000 gpm centrifugal	Taunton hydrant
IN	45*	95	75	70	55	115
OUT	190	180	190	155	200	

* Hydrant pressure at Camp Miles Standish.

FOR a number of years the City of Taunton, Massachusetts, had depended upon a single large water supply main to supply the entire industrial city of 37,000 population. The sudden break in this main, which resulted in loss of all water supply to the city for approximately 25 hours, is indicative of the importance to the fire service of giving attention to the possible results of water failure.

The break at Taunton occurred at approximately 3:00 A.M. on Friday, March 11. It was noticed that the level of water in the suction basin at the pumping station was dangerously low. Upon investigation the single 30-in. gravity feed main from Elders Pond to the pumping station was found to be broken.

The normal water consumption of Taunton is approximately 5,000,000 gallons per day. Engineers of the New England Fire Insurance Rating Association recommended that a minimum of 1,000,000 gallons per day be supplied in this emergency. Because it was not possible to introduce contaminated water into the city system by pumping from the river or other static supplies, it was necessary to supply filtered or chlorinated water to keep the system in operation.

Fortunately, Camp Miles Standish, located in the Taunton area, had 1,000,000 gallons of chlorinated water in storage and ample pumping capacity to replenish the supply. However, the nearest hydrant on the Miles Standish water system was 5,000 ft. from the outlying hydrant on the Taunton water system. In the emergency the New England Fire Insurance Rating Association called upon Mr. Ernest Maxim of the Maxim Motor Company of Middleboro, Mass., manufacturers of fire apparatus, to organize an emergency water supply service. Mr. Maxim requested aid from nearby fire departments known to have pumpers of 1000 gpm or greater capacity, and also obtained the loan of some 15,000 ft. of hose.

In addition to a 1000 gpm pumper from Taunton, two 1000 gpm pumpers responded from Fall River, one from North Attleboro, and a 1250 gpm pumper came from Brockton. The Quincy, Mass., fire department sent a pumper to cover the Taunton central station.

Fortunately, Massachusetts state law requires all 2½-in. hose couplings to have National standard thread. However, there was no standard method for hose loading and this caused some difficulty in the laying of three parallel lines between each pumper, which were spaced 1000 ft. apart.

The 1250 gpm centrifugal pumper from Brockton was connected to the last hydrant at Camp Miles Standish and pumped through three 1000 ft. lines to a piston pumper from North Attleboro. Part of the Brockton hose was 3-in. diameter, but not enough to make a significant contribution to the efficiency of the layout. The North Attleboro pumper pumped to a Taunton piston pumper and this in turn pumped to the first Fall River centrifugal pumper which pumped to a second Fall River pumper. This was 1000 ft. from a dead-end 6-in. main on the end of the Taunton water system. Because this main normally carried only 25 lbs. pressure, the pumpers had to restrict delivery to prevent a possible break in the main due to greatly increased pressure.

The Maxim Motor Company sent an auto load of various fittings for connecting up fire department apparatus. These proved very helpful in getting the relay in service in a minimum of time. There were two Ahrens-Fox piston pumps in the relay. These were set at the middle of the hose layout in order to use the centrifugal pumps on each end as shock absorbers for the positive pumps.

State Conservation Department cars and fire service radios on the State Conservation Department radio wave length, proved extremely helpful in getting the relay in service. A Conservation Department radio car started from the first pump and moved to each pump in turn giving the pressure readings over the radio as the pressures were adjusted at each pumper.

For the first two hours, considerable hose burst. After most of the bad hose had been eliminated, the relay ran for fifteen hours without interruption. As the pressures in the relay did not exceed 200 lbs., the failure of the hose would appear to indicate that some of the hose used was not equal in efficiency to the pumps the hose was intended to serve. Hose should be tested to 200 pounds pressure annually. It was observed that better hose would have brought a larger volume of water some two hours earlier.

It was estimated that the pumpers delivered better than 650 gpm or a total of 810,000 gallons during the 21½ hours the relay was in service. However, at the time, there was much apprehension as to whether the pumper relay would be able to deliver sufficient water to prevent collapse of heating boilers during the cold weather then in progress. It was feared that the input of water would not exceed the boiler and other essential domestic demands.

Fortunately, the break occurred at a most opportune time when the large manufacturing plants were shutting down for the week-end and when domestic consumption was small. The break was repaired by 4:00 A.M., Saturday, March 12, and the water system was returned to normal by 6:00 A.M., Sunday, March 13.

* * *

"OLD-TIMER"

Chief A. A. "Mac" McMillen of Grayslake, Illinois, completes 50 years of service in the fire department he helped to organize in 1899 (Member NFPA). Chief McMillen, now 82, was Hook and Ladder Foreman in 1899 and has been chief continuously since 1901. He was also mayor for 14 years, village marshal under six mayors, and also deputy county sheriff. The Lake County Firemen's Association held their annual convention at Grayslake on May 28, designating the day as "McMillen Day."

Los Angeles Fire Department Neptunes

Firemen Skin Divers Expert at Underwater Fishing

A GROUP of Los Angeles fire fighters have a unique underwater swim club which is perhaps one of the most interesting sports group active in any fire department. The club, officially known as the L.A.F.D. Neptunes, hunts underwater for fish, abalones (mollusks), and lobsters.

The objectives of the Neptunes club is to encourage the activity of "skin diving," to disseminate knowledge of safe skin diving techniques, to promote good fellowship, and to give members information about the sport and the best places to pursue it. The club makes arrangements for experienced divers to safely initiate the novice who wants to try this exciting sport. The skin divers of the L.A.F.D. make at least one trip each month for each platoon of the fire department. In general they hunt abalone in waters about ten feet deep but dives to fishing grounds twenty feet below the surface are not uncommon.

Recently, according to the *Firemen's Grape Vine*, published by the Los Angeles Fire Department Relief Association, a deal was made with Santa Monica Sea Scouts to use their boat for trips to Catalina Island where the waters are so clear it is possible to fish under water at night with the lights from the pier. The trip takes about four hours each way.

Fireman Ralph A. Davis speared a 33 lb. Yellowtail under water. This is believed to be a record for this type of fishing. It is quite a feat for a swimmer to bring in a large fish while swimming under water and dependent upon the oxygen in the lungs. On one trip Fireman Bill Barada of Engine 37A, president of the Neptunes, speared five halibut in twenty feet of water using a 5 ft. spear projectile from a CO_2 powered under water gun.

In summer groups of two to five members dive for abalone and fish. One fire fighter averaged more than three abalone per dive. Abalone have to be pried from the rocks, no small feat in deep water. In winter lobsters are included in the catch.

An annual skin diving competition for an entire platoon was attended by the families of member firemen. Diving was done in kelp beds 200 yards off shore from a convoy of rubber boats towed by a motor raft. Fireman Dave Jeffery won a "Sea-Net" spear as prize for a 10 lb. blue mouth cod. A stainless steel knife was the prize for the largest abalone taken.

Equipment for skin diving consists of bathing trunks, swim fins for the feet, diving glass, a spear, knife, large inner tube and a sack to hold the catch. When cold water demands it, the skin divers now employ a wool-lined rubber "frog suit" adopted from those developed for use by war-time underwater demolition teams but built to the L.A. Neptunes own specifications. They thus are now able to continue their sport despite the cold water of mid-winter. Their new suits are made of thin but strong rubber with an eight to one stretch and durable enough for several years of rough use. The suit weighs but five pounds. It is said that holes can be quickly repaired with cold patches. The first of the new frog suits was tested by Neptune president Bill Barada in Santa Monica Bay. In one hour he collected four pounds of abalone steak, one legal size lobster, and two king size fish, using his CO_2 gun. The catch on one trip more than paid for the small cost of the suit.

The skin divers lie on the inner tube and wearing the diving glass duck their heads under the water to see the swarms of marine life below. When ready they slip off of the inner tube, bend downward from the hips, thrust up their legs and dive for the bottom.

Numerous interesting stories of the adventures of the Neptunes have appeared in the *Firemen's Grape Vine*. The following item from the October 1947 issue is a typical sample: "The diving for lobsters is exciting and interesting sport. There is no limit on the number of lobsters you take but there is a size limit. When diving for lobsters it is a good practice to wear gloves. A good many experienced divers also wear protective clothing when diving for lobsters. This provides protection from cold water by minimizing the circulation of water over your skin. Second, it provides protection to some extent from sharp rocks and barnacles.

"Lobsters are nearly always found in caves under rocks. They lie in the entrances to these caves with their long feelers sticking out. When they are frightened they back rapidly into the cave. On top of their heads they have two strong, sharp pointed horns. The caves they are found in are usually situated so that the lobster can brace himself against the floor of the cave and the roof using his horns to anchor against the roof.

"To catch the lobster you run your hands up his feelers as far as possible. As soon as you touch his feelers he will back into his cave as far as he can and brace himself. You hold on as well as you can and follow him until he is braced, then renew your grip well up toward his head and push him in further. This frees his horns from the roof and he may be pulled out without breaking his feelers. The feelers are quite brittle and will break easily if grabbed near the end. Once you have the lobster out of the cave you can point his tail toward the surface, squeeze his feelers together and he will pull you right to the surface.

"Small lobsters may be caught by grasping them across the back with one hand. The lobster has a very strong tail which he can flap closed very quickly. It is advisable to keep your hands away."

Ralph Davis of the Neptunes in his new "frog suit" which makes under water swimming and fishing a year round sport on the southern California coast.

ASIDE from the healthful recreation obtained in skin diving there may be a very practical side to this sport for fire fighters. Throughout the country there is probably no group of men more often called upon to make rescues from ponds, lakes, rivers, and harbors. It is a common occurrence for children to break through thin ice. Hardy firemen divers equipped with frog suits, secured by a rope, and possibly using a mask or diving helmet suitable for underwater work, would be able to perform this life-saving work with less danger of pneumonia from immersion. Fire departments located near bodies of water might well carry a diving equipment.

Pierre, South Dakota, Votes Bond Issue for Fire Protection

CHIEF C. E. Zumwalt, of the Pierre Volunteer Fire Department, Pierre, South Dakota (member NFPA), reports of a $120,000 bond issue for fire department improvements. These improvements include two new fire stations, 1000 gpm pumper, and improved fire alarm facilities. Construction of the station is to be started this summer and a Type 95 Mack triple combination pumper has been ordered. Last fall the Pierre Fire Department completed a new station and placed a Type 45 Mack pumper in service.

Pierre, the capital of South Dakota, has 4500 population with an all-volunteer department of 75 members. The equipment consists of three pumpers, one hose tender with turret nozzle and a quadruple combination pumper-ladder truck.

Public Relations in a Volunteer Department

THE Ridgefield Park, New Jersey, Volunteer Fire Department has established among its officers the post of Public Relations Director. The Public Relations Bureau will handle all publicity and public relations for the entire department. In a volunteer fire department, where chiefs are rotated and captains move back into the ranks after their term of office, it has been difficult to fix responsibility for public relations work.

Accordingly, at Ridgefield Park, Chief Jacob Emmets, Sr., appointed Walter F. Bauer as Director of Public Relations. This appointment was confirmed by Fire Commissioner George F. Wagner and the Board of Commissioners consisting of Mayor Ross S. Vogt, Commissioner Herbert I. Lowe and Mr. Wagner.

Mr. Bauer, who has had several years of experience in public relations work, immediately began a Spring Clean-Up Campaign with the cooperation of one local and two county newspapers. Plans are under way for a speaker's bureau which will supply speakers on fire prevention and fire protection for meetings of civic and fraternal organizations.

Chemistry in Relation to Fire Risk

A Third Edition of the book "Chemistry in Relation to Fire Risk and Fire Extinction," by Alec M. Cameron is circulated in the United States by Pitman Publishing Corp., 2 West 45th St., New York, at $3.50 per copy. This book was specially written for students and candidates for the examinations of the British Chartered Insurance Institute and the British Institution of Fire Engineers.

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MORE DISASTROUS FIRES

These photos should remind our readers that disastrous fire losses are occuring daily. Delayed detection, delayed alarm, lack of automatic sprinklers, large building areas, inadequate protection contributed to $4,300,000 in losses shown on this page.

Gulf of Mexico, March 11. *Ralph Uribe*

A $1,000,000 fire destroyed a 160 ft. oil drilling barge, derick and LSM belonging to the Shell Oil Company. The equipment was located 20 miles out in the Gulf from Pass a Loutre, La. Explosions occurred when gas began blowing from a direction hole.

Bangor, Maine, April 16. *Wide World*

This 50-year-old grandstand at Bass Park was completely destroyed. Owned by the City of Bangor and leased to the Bangor Fair Association, the structure was valued at $100,000.

Oakland, Calif., April 19. *Acme*

Firemen made a number of rescues over ladders when this 5-alarm fire destroyed 8 stores and 2 apartment houses, making 100 persons homeless. The loss was placed at $225,000.

Chicago, Ill., April 19. *Acme*

Preliminary estimates placed the loss at $1,600,000 in this fire in the Block Lock Iron Foundry of the Hansell Elcock Company. Firemen prevented extension of the fire to large quantities of gasoline and oil stored nearby.

New York, N. Y., April 4. *International*

This 4-alarm fire, starting in a 3rd floor kitchen of this 7-story Harlem tenement had heavily involved the 3rd and 4th floors when firemen arrived. Five occupants were rescued over ladders. Water tower stream, plus 13 engine streams, was used to quell flames which extended through all upper floors.

Independence, Mo., April 15. *Acme*

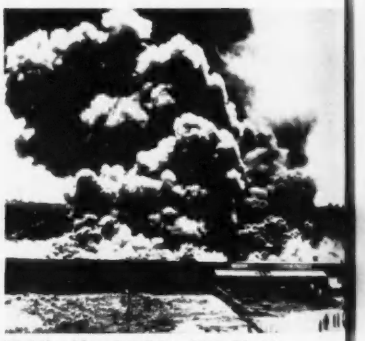
President Truman's home town suffered its second major fire of the year when flames, fanned by a high wind, completely destroyed this 3-story brick, wood-joisted drug store located on the city square. The loss was estimated at $125,000.

Old Augusta, Ind., April 3. *Acme*

While being driven through this small town a tank truck containing 5200 gallons of gasoline caught fire. Flames spread to four nearby houses. The driver of the truck escaped.

Marion, S. D., April 10. *Wide World*

Six persons were killed and 50 injured when a liquefied gas explosion wrecked this Roman Catholic Church during Palm Sunday services. Noting that the furnace pilot light was out and the odor of gas was present the janitor shut off the furnace. A parishoner attempted to start the furnace and the explosion occurred.



Mobile, Ala., April 16. *Wide World*

Nine engine companies unsuccessfully fought the fire in a one-story brick, large area, warehouse occupied by Sears Roebuck & Company, and containing paint, oil, tires and machinery. A woman employee was trapped and died in the fire. Loss $500,000.

Detroit, Mich., April 8. *NFPA*

Fire started in a kapoc fluffing machine in basement of this large upholstery trade school which had 40 apartments on the top floor. Students fought fire with extinguishers before giving alarm and entire basement was involved when firemen arrived. Fire spread upward through upholstery stock necessitating use of numerous high pressure streams. Estimated loss: $200,000.

British Firemen Test New Plastic Helmet

A PLASTIC firemen's helmet has been designed and may be adopted soon in Britain, according to the British Information Services. Made of woven glass fabric impregnated with a resin, it is considered better than conventional fire helmets now in use there. The new helmet is the result of research by Britain's Department of Scientific and Industrial Research and Fire Offices' Committee Joint Fire Research Organization. The new helmet combines lightness and safety with comfort.

The ideal helmet must protect the fireman from debris falling from above, and also from objects with a shearing edge such as glass splinters, slates or metal. Some of this debris will be hot or burning so the helmet must be strongly resistant to heat. It must not conduct electricity and should resist a current of at least 10,000 volts both when dry and wet. The helmet must throw falling debris and water clear of the face and neck, but must not obscure the wearer's vision. It should be comfortable and firm on the head, as light as possible and well ventilated.

The new British plastic helmet has been put through rigorous laboratory tests and has been found to possess these properties. Firemen in several brigades are now using the helmet under fire service conditions. A feature is a patent form of resilient head lining to take part of the impact of any weight falling on the helmet.

British Manual on Building

ANOTHER volume, No. 4, "Buildings, Their Construction and Internal Protection," has appeared, bringing to completion six of eight volumes in the *British Manual of Firemanship, A Survey of the Science of Firefighting*. This ambitious project was started during the days of the British National Fire Service and the present volume is the second to appear since the N.F.S. was broken up into some 140 large local fire departments. Other volumes of the series are: 1. Theory of Fire Fighting and Equipment; 2. Appliances; 3. Water Supplies; 6a. Practical Firemanship; 7. Fire Boats and Ship Fires. Two scheduled volumes, on Communications and on Special Risks, will complete the series.

Like others in the series, this volume is 5⅜ by 8¼ inches and paper bound. It is profusely illustrated with carefully executed line drawings and a large number of half-tone plates. The Manual of Firemanship series is published by His Majesty's Stationery Office, London (two shillings and sixpence for each part). This series is obtainable in the U. S. from the British Information Services, 30 Rockefeller Plaza, New York 20, N. Y., at 90 cents for each volume.

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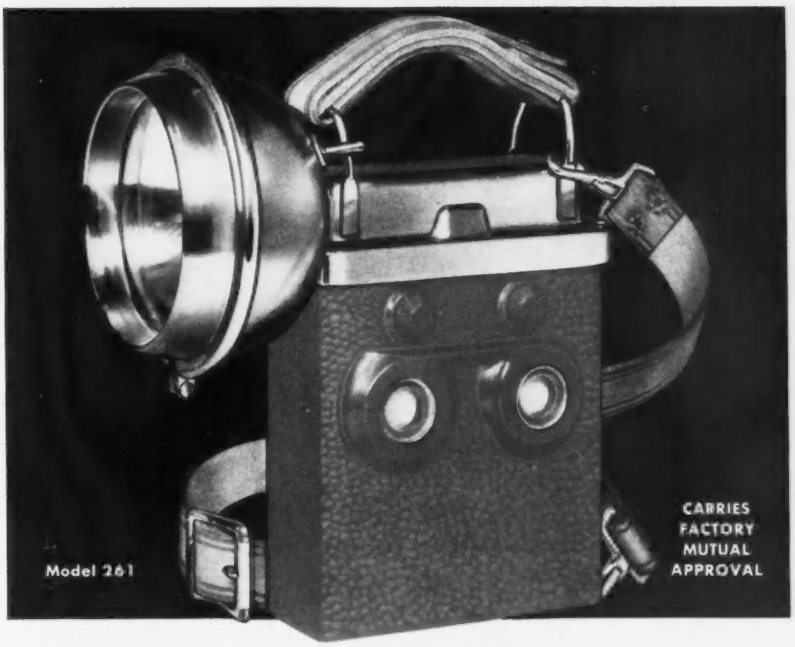

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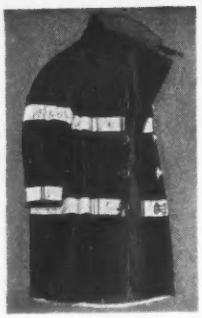

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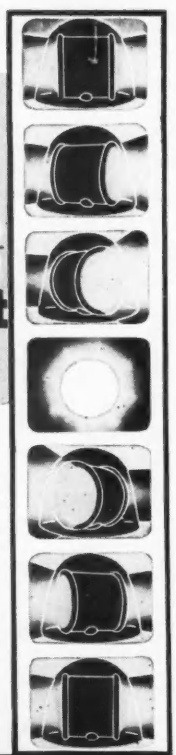

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Coordinated Training Program

THE Fire Department of Fall River, Massachusetts, has developed a unique new fire department training system so that each fireman and every fire company, now working a 48 hour week schedule, participate in a well rounded and complete training program.

This system was explained and demonstrated at Fall River Fire Department headquarters on April 13, when Chief George E. McGaw and other Fall River Fire Department officials were host to the Massachusetts Fire Department Instructors Association.

The new training plan was explained in detail by Assistant Chief William L. Carberry and demonstration drills were conducted by District Chief Henry E. Gangwisch, Drillmaster. In addition, Captain Arthur Miller of the Fire Prevention Bureau told of the work his seven inspectors were doing "to keep the other 300 firemen sitting in the stations."

With adoption of the 48 hour work week the Fall River department added 125 new men and many new officers. Old drill schedules based on two-platoon operations were entirely inadequate. Accordingly, a uniform system of training was developed by the chief officers and unanimously approved by the Board of Fire Commissioners.

Every fire company was issued a drill schedule which is coordinated with each tour of duty in the 48 hour work week. The schedule is shown on a card indicating daily subjects, both for study and drill evolutions. Monday through Friday each week there are two daily training periods: 1:30–2:30 for the day shift and 4:30–5:30 for the evening shift, although drills may last longer. Thus out of each 16-man company 9 to 10 men are drilled daily.

The schedule covers "everything a fireman should know" including pumps, ladders, inspections, etc. Three subjects are given each day, one of which is a practical evolution using the equipment. Assigned subjects follow a six-week cycle with every company officer following the same cycle. It is up to the officer to put each subject across and to allot the amount of time for each topic. While each company is given a schedule a year in advance, changes are made as the need is indicated, and refresher material is included in each six-week cycle. It is observed that the officers take great pains to know their subjects in advance and present the material in an interesting manner.

The official drill schedules or guide cards merely indicate the subjects for each date, designating topics by numbers conforming to the department training outline. For each subject some 20 questions have been issued to direct the instruction into practical channels.

Program followed by Fall River Firemen

The list of subjects is kept up to date by inclusion of such new items as tempered glass doors and neon lights.

Drillmaster Gangwisch observes the drill of each company weekly, to check the effectiveness of the officer. He gives orders to the officer just as at a fire, and the officer must then give effective orders and directions to the firemen. Any corrections are made in conference between the officer and drillmaster in private. In addition, the various district chiefs have an index card showing daily drills and tower drills for each company. They make daily inspections of house drills in their districts.

Test drills conducted by Chief Gangwisch may include any of 100 subjects or 62 evolutions in the course. Blackboard instruction of hydraulic problems is accompanied by actual hose layouts on the apparatus room floor. Layouts called for must not exceed the ability of the pump. Each drill starts the moment the drillmaster hits the floor. No smoking is permitted and the men work as at a fire.

THE training schedule also includes 20 to 22 visits to the drill tower for each company during warm weather. These visits are listed on the same schedule with company drills. Each man goes to the drill tower 10 to 11 times each season. There are two drill tower sessions daily. At the tower, companies are ordered into action just as at a fire. No time is taken to reload between evolutions and 15 evolutions are performed in an hour, followed by a ten minute rest period. At least 40 evolutions are performed at the tower daily. Company drill tower evolutions include consecutive and simultaneous use of booster lines, 1½-in. leader lines, 2½-in. lines, deck guns, ventilation, use of masks, pumper relay, and even clean-up and overhaul. There are 62 evolutions in the prescribed course and 22 are being added.

Each September, a course is conducted in pump operation. Each pump goes to a pond and every man operates at draft. All men are drivers and pump operators. The drillmaster stages all sorts of emergencies that may cause loss of water at a fire. Chief McGaw, Assistant Chief Carberry and the Master Mechanic standby to assist and observe. At hydrant drills the effects of hard and soft suctions and of pumps operated from a supply line are demonstrated. When the pump course is complete, pumper and crew are ready for winter operation.

Chief Gangwisch points out that the Fall River Fire Department training program includes four phases: 1. Company house drills and instructions under company officers; 2. Drillmaster and

Continued on page 22

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Flint Township Fire Department

THE fire department of Flint Township, Michigan, operates with two fire chiefs: Co-chief Roy F. LePard and Co-chief Edward J. Maxwell. There is a chief on each platoon working 24 hours on, and 24 hours off. The department has 20 active fire fighters and protects a 36 square mile area which includes Chevrolet and Fisher Body plants, a large airport, four high schools, bulk oil storage plant and 12,000 residents. Fire company No. 1 consists of 2 paid men and 12 volunteers housed in the Township building with office, living quarters and large recreation room. Company No. 2 now being organized has 8 volunteers.

Apparatus consists of two John Bean high pressure fog pumpers, one mounted on a 1946 Dodge and the other on a 1949 Dodge. The department is entirely financed by taxes but social activities are financed by dues of members. Each volunteer is paid $3 for each call answered. Members attend the University of Michigan Fire College and all are required to attend the fire training school maintained by the John Bean Company which consists in training in techniques of handling various types of actual fires with the high pressure fog apparatus. Members have also completed the Red Cross first aid course.

Volunteer Fire Department, Ladysmith, B. C.

THIS volunteer fire department has been operating for approximately fifty years. There are fifteen active members under Chief Frank Jameson and Assistant Chief Matthew Gilson. K. D. Gourley is Secretary. The company protects a community of 3500 persons. A two story stuccoed fire hall houses two trucks, a 1941 Bickle Seagrave pump and a Ford hose truck. Upstairs is the meeting hall, billard table, kitchen, toilet. Men are paid $1 per drill or fire. Last year the department took the Allen Cup in the annual meet conducted by the Vancouver Island Fire Fighters Association.

Mossbank, Saskatchewan, Fire Department

THIS community of 600 persons, sixty miles south of Moose Jaw has a volunteer fire department organized January 12, 1949. One of their first acts was to join the NFPA Volunteer Fire Company Section. Louis Scheinbirn has been elected chief for a one year term. D. F. Hantelman is Assistant Chief and Garnet A. Willits is Secretary. There are 25 active fire fighters. A one story fire station has been provided. A weekly drill and fire school is underway. Men are paid $1 per hour on alarms. The fire truck carries 100 gallons of foam and 300 gallons of water. Also available are chemicals and ladders.

Fire Protection District, Klamath Falls, Oregon

THE Suburban Rural Fire Protection District covering nine square miles of suburban business and residential property east and south of the city of Klamath Falls was organized a year ago on June 1, 1948. The department has fifty members, all of whom serve without pay except Chief Melvin G. Gordon and Assistant Chief Harold E. Briscoe. The officers are appointed by the board of directors and the department is supported by taxes assessed by the board of directors and collected with regular property taxes in accordance with Oregon rural fire protection law. Volunteers raise funds by dances.

The department is housed in a three stall station which includes an apartment for the chief, dormitory for firemen, kitchen and recreation room. Apparatus includes a 500 gpm pumper with high pressure fog booster equipment, and a 1000 gallon tank truck with 500 gpm OCD pump located back of the cab. It is hoped to obtain 2-way radio and a one ton chief's truck equipped with high pressure fog. Regular training meetings and drills are conducted under the State vocational education firemen training program.

In the first six months of operation the department answered 45 alarms with property valued at $190,000 at risk. Loss totalled about $10,000 of which $6,600 was for a barn containing baled hay, first reported as a haystack fire.

VOLUNTEER FIRE COMPANY SECTION MEMBERSHIP

($12.50 annual dues) Eligible:

(1) all bona fide volunteer fire organizations in any community.

(2) all fire departments and companies in communities of less than 25,000 population.

(3) all industrial fire brigades.

Member companies receive ten copies of FIREMEN magazine each month, mailed to the homes of individual firemen. Beyond the ten, additional copies of FIREMEN cost $1 per year.

Volunteer Fire Company Section members receive at their headquarters, one copy of all publications sent to NFPA individual associate members.

INDIVIDUAL ASSOCIATE MEMBERSHIP

($12.50 annual dues) Eligible:

Individual fire departments, officers, firemen, and others interested in fire safety. NFPA associate members in the fire service receive: one copy of FIREMEN magazine monthly, the NFPA Quarterly, the monthly News Letter, technical standards, popular bulletins and posters.

All associate members have one vote in Association affairs.

NOT too infrequently in travels about the United States and Canada, the editor of FIREMEN and other members of the NFPA staff encounter volunteer firemen who say, "We have never seen FIREMEN before. How do we get it?" This is despite the fact that the NFPA has a list of some 14,000 volunteer fire departments and sends thousands of sample copies of FIREMEN to these fire departments in the course of each year.

Accordingly, we urge member firemen not to take it for granted that your neighboring departments are NFPA members and are getting FIREMEN and the other NFPA publications sent to members. Please invite them to join the Volunteer Fire Company Section. If you wish to suggest membership to fire companies in your county association we will be glad to send enough sample copies for you to distribute to each fire company that might be interested in membership.

BACK in January of 1934, several months after the NFPA organized the Volunteer Fireman's Section, there were only 1,000 members. By June of that year there were some 5,000 members and the 10,000 figure had been passed by June of 1936. There has been a steady increase in membership and at the present time there is a total of 20,645 men enrolled in the 1,320 fire companies in the Section.

New members of the NFPA Volunteer Fire Company Section are:

Arlington Fire Dept., Arlington, Fla.
Arlington Hgts. Fire Dept., Arlington Hgts., Ill.
Bradley Gardens Vol. Fire Co., Inc., Somerville, N. J.
Cherry Valley Fire Prot. Dist., Cherry Valley, Ill.
Corning Auxiliary Firemen's Assn., Corning, N. Y.
Deseronto Fire Dept., Deseronto, Ont.
Flint Township Fire Dept., Flint, Mich.
Huntington Vol. Fire Dept., Huntington, Ore.
Northeast Harbor Fire Co., Inc., Northeast Harbor, Me.
Porcupine Vol. Fire Brigade, Porcupine, Ont.
Sutherland Fire Dept., Sutherland, Iowa
Tuscumbia Vol. Firemen's Assn., Tuscumbia, Ala.
University Place Vol. Fire Dept., Inc., Tacoma 6, Wash.
Woodlawn Vol. Fire Dept., Cincinnati, Ohio

Notice: If at any time a member of the Volunteer Fire Company Section does not receive FIREMEN magazine before the end of the month on which it is due, please send full details to the National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass.

Community Fire Brigade

Continued from page 7

was also placed for a 400 gpm (500 U. S. gallons) front mount pump, and all other equipment in accordance with the recommendations supplied by the Fire Marshal's Office.

Collections continued, not one citizen was missed. The amounts varied from as low as 25c to as high as $500. Dances, basket socials, picnics and other social events were held, as a result by the end of the year the sum of $5,300 had been realized, and was in the hands of the treasurer.

THE equipment of the East Bathurst Fire Brigade at present consists of the following:

1 Fire truck, consisting of a two ton truck chassis mounted with a 475 gallon booster tank.
1 400 gpm front mount pump, with four-inch suction, two 2½ in. discharges, and a 1½ in. discharge. This pump is capable of pumping from hydrants or any natural water supply.
2 Wye connections. 2½ in. to 1½ in.
3 2½ in. nozzles with play pipes.
1 1½ in. open nozzle.
1 1½ in. fog nozzle with applicator.
600 feet of 2½ in. hose.
2,200 feet of 1½ in. hose.
Siren, ladders, axes, lights, shovels, extinguishers and all standard small equipment, firemen's clothing.

This equipment has paid for itself since being purchased, in the actual amount of money saved, and the sense of security given to the citizens. It is stored in a heated garage under the supervision of a skilled mechanic who serves as pump operator.

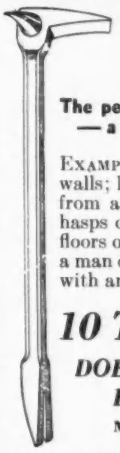
Alarm of fire is given by telephone. A siren is located in the village itself, and plans are under way for the installation of sirens throughout the area. Training is held regularly for the fireman, and their activities are not confined to fire fighting alone, but under the supervision of Chief Milton Carter, members are becoming fire prevention conscious. Meetings are held at which fire prevention lectures are given and films shown. In addition, they recently entered upon an inspection campaign to cover the entire area.

The Brigade is now a member of The National Fire Protection Association. To stimulate interest in the organization they recently had cards printed and distributed to each citizen in the community describing the workings of the brigade, and supplying them with full information regarding what they should do in the event of fire.

East Bathurst district is justly proud of their Fire Department. We of the Fire Marshal's staff are proud of them. In the near future the Board of Underwriters will be requested to re-write this community and we expect they will obtain a very substantial reduction in their fire

Continued on page 19

THE HALLIGAN TOOL



The perfect tool for fire service — a priceless tool at a fire.

EXAMPLE: The hook takes side walls; low ceilings; high ceilings from a chair or table; removes hasps or locks; drains, takes up floors or tin-covered roofs before a man could take a second swing with an axe, etc., etc., etc.

10 Tools in One!

DOES EVERYTHING EVERYWHERE

Made from One Piece!

8½ lbs. PAT. PENDING

FIRE APPARATUS ROLLING WITHOUT THIS ALL-PURPOSE TOOL CHEATS THE CITIZENS, THE FIRE CHIEF, & THE FIREMEN WHO DO THE WORK!

Chief William G. Wandras, Kearny, New Jersey, Past President of the Eastern Division of the International Association of Fire Chiefs says: — **"THE FINEST IMPLEMENT IN THE FIRE SERVICE."**

HALLIGAN TOOL COMPANY

1505 Metropolitan Ave. Bronx 62, N. Y.

FIREMEN'S UNIFORMS

SHIRTS
BADGES
CAPS
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Manufacturers of Uniforms for over 50 years

Official Makers of Uniforms for New York City Fire and Police Departments, and Serving Other Departments From Coast to Coast.

RUSSELL UNIFORM CO.

1600 Broadway, New York 19, N. Y.

***Write for Fire Dept. catalog* H-60**

Anti-Slip plus Featherweight

For Wear Over Leather Shoes

On in a jiffy — exceptionally light in weight. Note the razor-fine slits in the soles — they cling and stick on chancy footing, even when wet. This is the patented Top-Sider ANTI-SLIP sole famous with sailors. Soft, pliant rubber legs strap high over shoes and trousers. Roll and stow in your car.

Men's Full Sizes 5 to 13
Knee-length $9.75
Hip-length $11.95

AT YOUR DEALER'S OR USE COUPON

SPERRY TOP-SIDER ®

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Please send me.....pairs Top-Sider Pilot Boots, Knee-length @ $9.75 pair, size.....
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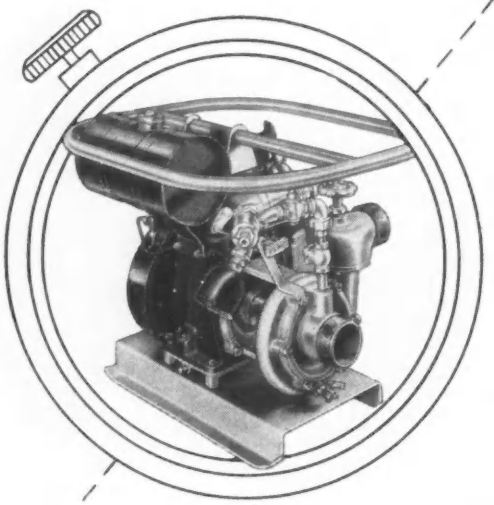
COMPACT as a watch!



THE compactness of this 3XC booster pump makes it easy to carry on your truck any place.

Delivers 300 GPM to booster tanks. Ideal for pumping out basements—handling dirty water without damage, thus saving wear on your expensive equipment. When connected to booster tank can be used to fight grass fires with truck in motion.

• • •

We are also the manufacturers of the Barton-American Front and Mid-ship Mounted Fire Pumps.

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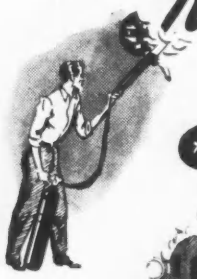
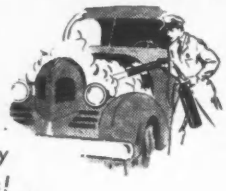
AMERICAN-MARSH PUMPS
BATTLE CREEK MICHIGAN

TURN YOUR SPARE TIME INTO PROFITS!

SELL *Randolph* FIRE EXTINGUISHERS



$84. A WEEK FROM 2 SALES A DAY!



All Sizes . . . Approved By Underwriters!

Your prospects are *unlimited* . . . every factory, farm, home, garage, laundry, boat and car needs Randolph protection.

Here's the modern extinguisher with a host of fire-fighting features. It's easy to use . . . just one trigger-touch sends snowy CO_2 deep into the fire . . . smothers it in split-seconds. Randolph is non-toxic, no damage to equipment. Does not freeze, deteriorate, or conduct electricity.

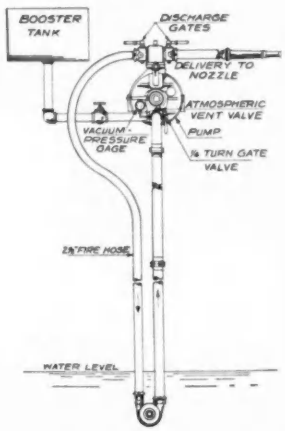
Build a successful *part-time* business as a Randolph Dealer. Sell the nationally advertised Randolph Extinguishers used by leading industries everywhere. Write for your full or part-time Dealership Plan *now!* The same plan that is bringing big profits to scores of other firemen. Qualify for an *exclusive* territory by acting . . . TODAY!

RANDOLPH Laboratories, Inc., 5 E. Kinzie St., Chicago, Ill.

Suction Booster Useful at Swansea, Massachusetts

THE Town of Swansea, Massachusetts, is located on Mount Hope Bay opposite from the City of Fall River. The fire department has two 500 gpm pumpers each with a "Hi-Lift" suction booster mounted on the running board. Chief John W. Borden reports that at one fire in a congested area a number of houses were saved although the pumper was 25 ft. above the river and 150 ft. from the water. The feed line to the suction booster was 200 ft. long and the return line 150 ft. long. The layout supplied two good streams from 1½-in. hose, operating for an hour.

The Swansea firemen practice frequently with the suction boosters and have gained confidence in their use. Chief Borden has issued the following step by step instructions to prevent any confusion in placing the suction boosters in service. The Swansea department also has two tank trucks which place 1½-in. lines in service while pumpers are taking suction.



1. Lay 2½ in. hose line from discharge gate on right side of apparatus to suction booster intake (marked "In") and open discharge gate.

2. Place 2½ in. closed gate valve on pump intake on left side of apparatus.

3. Lay 2½ in. hose line from closed gate valve to suction booster discharge (marked "OUT").

4. Immerse suction booster in water to a depth of one foot or more with the strainer well away from mucky or sandy bottom. Place strainer in pail if necessary.

5. Open the tank valve and the hand churn valve wide.

6. Place pump in high gear and speed up motor to 900 RPM.

7. Slowly close the hand chun valve and build up the pressure to 50 lbs., thereby exhausting the air from the two hose lines.

8. After all air has been exhausted from the two hose lines, close tank valve. Open the closed gate valve wide and

slowly close the hand churn valve, thereby building up the pump pressure to 125 lbs.

9. Slowly open tank valve allowing the booster tank to refill, then close the booster tank valve.

10. Open discharge gate to the fire line slowly, and accelerate the motor to maintain the pump pressure from 125 to 150 lbs. A positive pressure must be maintained in the suction line at all times, therefore watch the compound gauge and do not allow it to go below 5 lbs.

11. Lubrication — After using be sure to inject a small quantity of Alemite chassis lubricant into the two Zerk fittings in the casing.

Note: The useful volume of water that can be delivered to the fire line is limited by the capacity of the long hose line from the suction booster to the pump. If the fire line tends to exceed this quantity it will be necessary to throttle the fire line discharge gate so that the suction line will not collapse. Therefore maintain positive pressure of at least 5 lbs. in the suction line by watching the compound gauge.

Community Fire Brigade

Continued from page 17

insurance premium rates. In most cases this should reimburse the individual or firm for their contribution. It has been a pleasure as a Deputy Fire Marshal promoting Fire Prevention and Protection to work with these people, and I have written this as a tribute to a very deserving effort which we hope will be adopted by other communities. In saying this it is not my intention to forget the other seventeen rural communities in New Brunswick who, during the past two years, have obtained similar or other equipment and completed fire protection organizations, but in all other cases they have been backed up by some sponsoring organization or incorporation.

●

Four itinerant instructors serving Oregon fire departments. Left to right: Robert English of Portland, employed by the Oregon Vocational Education Department; and John Pickett of Baker; Jim Kicks of Cannon Beach; and Eldon Winkley of Corvallis. The last three are employed by the Fire Marshal Department.

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Standard fabrics for over eighty years

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AND OTHER STANDARD
NUMBERS USED BY
FIRE DEPARTMENTS OF
LEADING CITIES

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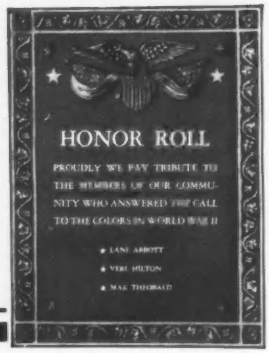
NEW YORK CITY



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● **Memorialize your Department heroes for all time on these handsome tablets, executed to individual requirements—of hand-chased cast bronze by NEWMAN.**

OUR 67th YEAR

Catalog of tablets in colors, also folders of World War II honor rolls, sent on request, without any obligation. WRITE TODAY.

NEWMAN BROTHERS, Inc.
Dept. F Cincinnati 3, Ohio

CAIRNS

Outfitters to Firemen Since 1836

LEATHER HELMETS

No other helmet — whether of leather, metal or plastic — has yet matched the stand-up-ability and wear-proofness of CAIRNS LEATHER HELMETS. Many of them, in the largest departments where the service is hardest, are still in use after 25 or 30 years of tough duty. In the long run, they are the cheapest helmet a fireman can own — for they'll give him lifetime protection.

Write for Catalog 330

CAIRNS & BRO., Inc.
ALLWOOD, CLIFTON, N. J.

Oregon Amends Fire District Legislation

DURING March, Governor Douglas McKay signed into law Oregon Senate bills 246 and 261. The first of these legalizes the existence and operations of rural fire protection districts notwithstanding minor irregularities in their organization or operation. Senate bill 261 amends the law relating to petitions to organize rural fire protection districts. Under the new legislation, 25 percent of those permitted to sign such petitions or 200 such persons, whichever is the smaller figure, will be the determining factor in the acceptance of petitions by the county court.

Fire districts will be formed only after an affirmative vote of a majority of those voting at elections called for the purpose. Formerly, it has been mandatory upon county courts to declare a fire district formed if less than 25 percent of the legal property owners appeared in opposition to its formation.

●

FIRE SCHOOLS

Alabama. Annual Fire School, University, June 20–24.

Connecticut. Annual Fire College, New London, June 9–12.

Colorado. State Firemen's Fire College and Convention, Idaho Springs, Aug. 25–27.

Illinois. 25th Annual Fire College, Urbana, June 14–17.

Kentucky. State Fire School, Lexington, June 7–9.

Michigan. 21st Annual Fire College, University of Michigan, Ann Arbor, June 14–17.

Missouri. Thirteenth Annual Fire Conference, University of Missouri, Columbia, June 28–30.
Southeast Missouri Annual Conference, Aug. 9–10.

New Mexico. Firemen's Convention and Fire School, Silver City, June 13–16.

Oklahoma. Sixteenth Annual Short Course, Sillwater, June 6–25.

South Dakota. State Fire School, Huron, June 12–17.

Pennsylvania. Fourth Berks County Fire Training School, Wyomissing Grade School, Wyomissing, June 8–12.
Eleventh Annual State Fire School, Lewistown, Aug. 8–12.

Texas. Twentieth Annual Session, Firemen's Training School, College Station, July 10–15.

Utah. Fifth Annual Firemen's Training School, Salt Lake City, June 16–18.

West Virginia. Nineteenth Annual Fire School, Morgantown, July 25–28.

Ontario. Fire school at McMaster University, Hamilton, June 2–3.

CIRCUL-AIR
FIRE HOSE DRYER

- Dries hose in a few hours
- Saves space — fits in any corner
- Keeps all hose ready for service
- Makes good hose last longer
- Reduces new building costs
- Improves station design
- Dries fire clothing, too

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THE CIRCUL-AIR CORPORATION
575 East Milwaukee Street
DETROIT 2 ✧ MICHIGAN

CARPENTER LIGHTS

Clears *your* side of the way, too, as well as warns those approaching.

Flash'N Wag
(All Patent Rights Protected)

Write For Folder

In a class by itself. Combination flashing, oscillating WIG-WAG Redhead. Beam range 1000 feet ahead, visible for miles. Safer, faster, quieter runs. 6" and 8" diameter sizes.

"Master-Light-Makers for 34 Years"

CARPENTER MFG. CO.
168 MASTER-LIGHT BLDG.
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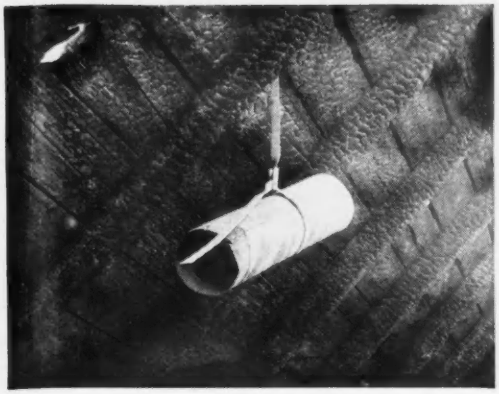
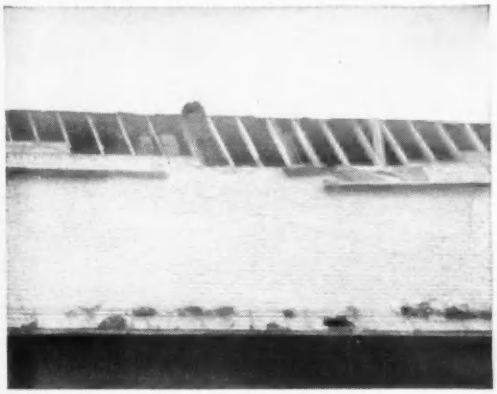
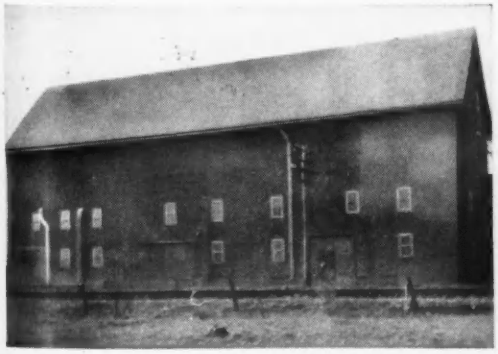


Note—deep charring of inside of elevator roof. High-pressure fog equipment killed flames quickly, with little damage to elevator or grain.



Small—damage from fire limited to elevator roof. Adjuster said conventional hose lines would have caused much greater water damage.



New—roof was the major repair on 60-foot elevator. Use of John Bean Fog Fire Fighter averted ruin of thousands of dollars worth of grain.

John BEAN

HIGH-PRESSURE FOG FIRE FIGHTER

Successfully Combats Elevator Fire

Success of Middleport, New York, fire department in holding down grain elevator fire damage to $500 credited by chief to enterprising use of John Bean High-Pressure Fog apparatus by his men.

IN ELEVATOR fires, water damage at blazes and delay in getting to work on the fire are often big factors in heavy losses.

Not so when your department is equipped with John Bean High-Pressure Fog Fire Fighters! In this case history, the elevator fire was subdued by firemen who quickly climbed through smoke and heat with a Bean High-Pressure Fog Nozzle and rapidly brought the flames under control, with *minimum water damage to the grain.* Maximum protection with minimum fire loss is assured with John Bean Fog Fighters. Write for additional details.

Successful—in grain fire fight as on all types of fires. John Bean High-Pressure Fog Fire Fighter, carrying its own water supply, provides two guns of 30 gallons each and 850 lbs. pump pressure.

BEAN *Original* **HIGH-PRESSURE FOG FIRE FIGHTER**

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY AND CHEMICAL CORPORATION

JOHN BEAN DIVISION, DEPT. 127, LANSING 4, MICH. • JOHN BEAN DIVISION (WESTERN), 426 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

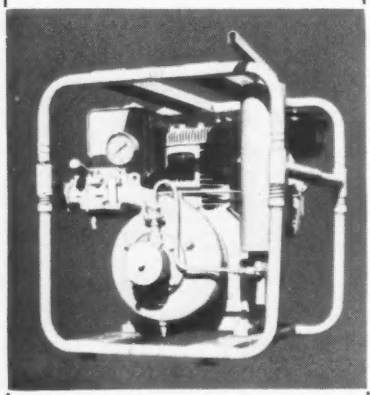
MORE POWER!
MORE COMPACT! LIGHTER!

Hale Type FZZ

PORTABLE Pumping Unit

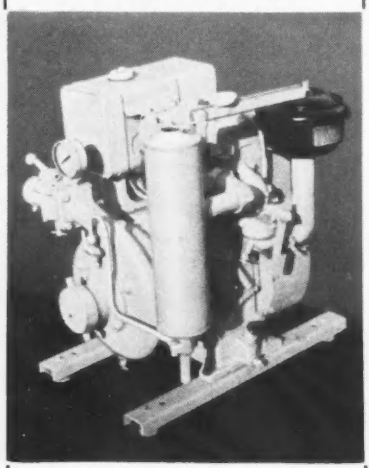
With more power — and with a more compact design resulting in lighter weight— the new Hale Type FZZ is another example of constant Hale research resulting in constant improvement.

The FZZ pumps from draft 60 GPM at 90 lbs. up to 150 U. S. gallons at 30 lbs. Ample reserve capacity.



Above—FZZ Mounted in Carrying Frame.

Pumping Solid Stream and Fog.



FZZ mounted on rubber insulated steel channels; also available on Truck-type wheels.

Write today for NEW FOLDER on the Hale Type FZZ Unit. Ask for Demonstration.

HALE FIRE PUMP COMPANY
Conshohocken, Pa.

British Columbia fire department instructional unit and fire service instructors operates under the direction of Provincial Fire Marshal William Walker (member NFPA). Left to right: Ed. Schwartz, Instructor; Basil Nixon, Deputy Fire Marshal; Ernie Rickey, Instructor; Percy Bugbee, General Manager, NFPA; W. A. Walker, Fire Marshal; John Newall, Chief Instructor.

Fall River Training Program

Continued from page 15

chief officer supervision of instruction by company officers; 3. Tower drills conducted as fire-ground operations; 4. Service tests of pumpers and operators.

Ninety percent of the Fall River firemen have taken the Massachusetts University Extension fire protection course. The NFPA Handbook of Fire Protection and other fire service publications are provided in each station.

NEW PYRENE NOZZLE

A NEW nozzle, giving either solid stream or spray discharge, has been made standard equipment on the one-gallon and two-quart stored-pressure, vaporizing liquid extinguishers of the Pyrene Manufacturing Company, Newark, N. J. This nozzle is lever operated, and self-closing which eliminates the necessity of setting the extinguisher down to open or close the discharge valve, thus avoiding waste of time and liquid. The solid stream has extended range and will quickly get to hard-to-reach places; the spray is said to speedily cover a large area, vaporize quickly, and avoid agitation of the surface of flammable liquids, cutting down extinguishing time.

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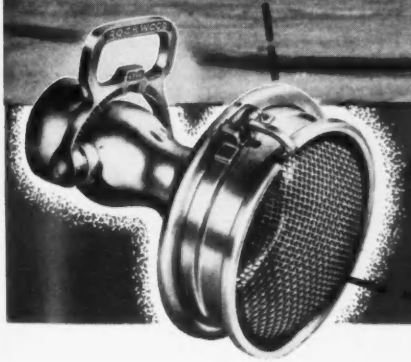
MACK ANNOUNCES DIESEL CATALOG

THE Mack International Motor Truck Corp., 350 5th Ave., New York 1, N. Y., has announced a catalog of their newly designed 4-cycle, 6-cylinder, 150-h.p. diesel engine, the END 672. As a companion to this attractive, plainly written, well illustrated catalog, a 68-page booklet has also been released entitled "Understanding the Automotive Diesel," written in more technical language, contains valuable data for diesel owners and prospective buyers as well as students of diesel engines. Both of these publications are available, free of charge, from the company.

Chief Thomas Phelan of Trenton, N. J. is shown with four 1000 gpm pumpers delivered to the city by the Ward LaFrance Truck Corp. of Elmira, N. Y. With Chief Phelan is J. J. Duffy of Ward LaFrance. It may be noted that the pumpers have a front suction intake as well as the usual side connections and a 2½-in. gated intake. The apparatus carries 1-in. cotton rubber lined hose in place of the usual rubber booster hose.

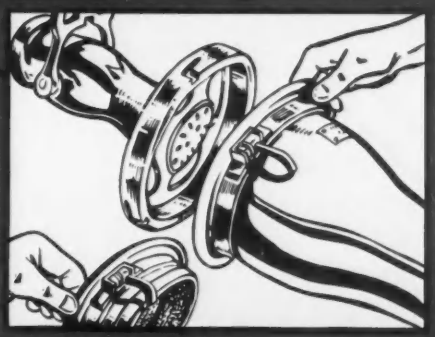


FASTER and MORE ECONOMICAL EXTINGUISHMENT of GASOLINE FIRES using ROCKWOOD FogFOAM

Whip gasoline fires with Rockwood's new Type FFF FogFOAM Nozzles and Rockwood Foam Liquid. They offer several advantages over old style, slow-acting *powder* type foam and any other type of liquid foam equipment now on the market.

FogFOAM produced by Rockwood enables you to: (1) use smaller hose lines; (2) bring foam lines into action faster; (3) apply foam directly to surface of burning gasoline; (4) cover large areas of burning gasoline or other flammable liquids faster than with a solid foam stream; (5) put out gasoline fires at *less cost* by using *less foam;* (6) *put out* and *keep out* gasoline fires; (7) protect firemen with *wide, sheltering* discharge of FogFOAM; (8) clean up foam residue following fire more easily and with less effort than possible with old style powder foam.

Write for literature giving more details.



Rockwood's Type FFF Nozzles give you choice of three types of discharge: (1) FogFOAM, (2) Solid Foam Stream, or (3) High Velocity WaterFOG. Picture shows quick shift from FogFOAM Screen to Solid Foam Stream on Rockwood Type FFF Nozzle.

ROCKWOOD

ROCKWOOD SPRINKLER COMPANY

88 HARLOW STREET WORCESTER 5, MASSACHUSETTS

Specialists in Fire Protection Engineering, Equipment and Installation since 1907

PROTECTION by AMERICAN-LaFRANCE

Photo courtesy of GALVESTON C of C

GALVESTON, TEXAS, one of the most important industrial and seaport cities in North America is modernizing its fire fighting equipment with the addition of seven new AMERICAN LaFRANCE Cab-Ahead-of-Engine pumpers, and two 4-wheel aerial ladder trucks equipped with 100 foot all steel aerial ladders. Dependable fire protection is assured with this new American LaFrance equipment operated by the capable and efficient GALVESTON Fire Department.

Write for free literature on equipment to protect your city or community.

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